

METHODS FOR IMPROVING FLOW THROUGH FLUIDIC CHANNELS

ABSTRACT OF THE DISCLOSURE:

A method for improving fluidic flow for a microfluidic device having a through hole or slot therein. The method includes the steps of forming one or more openings through at least part of a thickness of a substrate from a first surface to an opposite second surface using a reactive ion etching process whereby an etch stop layer is applied to side wall surfaces in the one or more openings during alternating etching and passivating steps as the openings are etched through at least a portion of the substrate. Substantially all of the etch stop layer coating is removed from the side wall surfaces by treating the side wall surfaces using a method selected from chemical treatment and mechanical treatment, whereby a surface energy of the treated side wall surfaces is increased relative to a surface energy of the side wall surfaces containing the etch stop layer coating.